

Name: _____

Date: _____

FOIL when $A \neq 1$ solution (version 8)

FOIL the expressions shown below:

1. $(-3x + 9)(-6x - 8)$

$$\begin{aligned} &(-3)(-6)x^2 + (-3)(-8)x + (9)(-6)x + (9)(-8) \\ &(18)x^2 + (24)x + (-54)x + (-72) \\ &18x^2 - 30x - 72 \end{aligned}$$

2. $(6x + 7)(-8x - 9)$

$$\begin{aligned} &(6)(-8)x^2 + (6)(-9)x + (7)(-8)x + (7)(-9) \\ &(-48)x^2 + (-54)x + (-56)x + (-63) \\ &-48x^2 - 110x - 63 \end{aligned}$$

3. $(-6x - 6)(-2x + 4)$

$$\begin{aligned} &(-6)(-2)x^2 + (-6)(4)x + (-6)(-2)x + (-6)(4) \\ &(12)x^2 + (-24)x + (12)x + (-24) \\ &12x^2 - 12x - 24 \end{aligned}$$

4. $(-2x - 3)(-7x + 7)$

$$\begin{aligned} &(-2)(-7)x^2 + (-2)(7)x + (-3)(-7)x + (-3)(7) \\ &(14)x^2 + (-14)x + (21)x + (-21) \\ &14x^2 + 7x - 21 \end{aligned}$$

5. $(3x - 5)(8x + 8)$

$$\begin{aligned} &(3)(8)x^2 + (3)(8)x + (-5)(8)x + (-5)(8) \\ &(24)x^2 + (24)x + (-40)x + (-40) \\ &24x^2 - 16x - 40 \end{aligned}$$

FOIL the expressions shown below:

6. $(-2x + 3)(7x - 5)$

$$\begin{aligned} &(-2)(7)x^2 + (-2)(-5)x + (3)(7)x + (3)(-5) \\ &(-14)x^2 + (10)x + (21)x + (-15) \\ &-14x^2 + 31x - 15 \end{aligned}$$

7. $(9x - 5)(5x + 7)$

$$\begin{aligned} &(9)(5)x^2 + (9)(7)x + (-5)(5)x + (-5)(7) \\ &(45)x^2 + (63)x + (-25)x + (-35) \\ &45x^2 + 38x - 35 \end{aligned}$$

8. $(-7x + 5)(4x + 8)$

$$\begin{aligned} &(-7)(4)x^2 + (-7)(8)x + (5)(4)x + (5)(8) \\ &(-28)x^2 + (-56)x + (20)x + (40) \\ &-28x^2 - 36x + 40 \end{aligned}$$

9. $(9x - 5)(-9x - 5)$

$$\begin{aligned} &(9)(-9)x^2 + (9)(-5)x + (-5)(-9)x + (-5)(-5) \\ &(-81)x^2 + (-45)x + (45)x + (25) \\ &-81x^2 + 25 \end{aligned}$$

10. $(-8x + 5)(-9x - 8)$

$$\begin{aligned} &(-8)(-9)x^2 + (-8)(-8)x + (5)(-9)x + (5)(-8) \\ &(72)x^2 + (64)x + (-45)x + (-40) \\ &72x^2 + 19x - 40 \end{aligned}$$